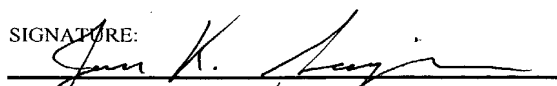


page 1 of 2  
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JC13 Rec'd PCT/PTC 08 MAR 2002

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) <b>10/088934</b>		INTERNATIONAL APPLICATION NO. PCT/FR00/02461		ATTORNEY'S DOCKET NUMBER HO-P02404US0	
21. <input checked="" type="checkbox"/> The following fees are submitted:				<b>CALCULATIONS</b> PTO USE ONLY	
<b>BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)):</b>					
<input checked="" type="checkbox"/> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO ..... \$1040.00					
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO ..... \$890.00					
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... \$740.00					
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... \$710.00					
<input type="checkbox"/> International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) ..... \$100.00					
<b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b>					
Surcharge of \$ 130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).				\$ 1,040.00	
				\$ 130.00	
<b>CLAIMS</b>	<b>NUMBER FILED</b>	<b>NUMBER EXTRA</b>	<b>RATE</b>		
Total claims	27-20 =	7	x 18.00	\$ 126.00	
Independent claims	1-3 =		x	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(s) (if applicable)			+	\$	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$ 1,296.00	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				\$	
<b>SUBTOTAL =</b>				\$ 1,296.00	
Processing fee of \$ _____ for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492 (f)). +				\$	
<b>TOTAL NATIONAL FEE =</b>				\$ 1,296.00	
Fee for recording the enclosed assignment (37 CFR 1.21 (h)). Assignment must be accompanied by appropriate cover sheet (37 CFR 3.28, 3.31) ( _____ per property). +				\$	
<b>TOTAL FEES ENCLOSED =</b>				\$ 1,296.00	
				<b>Amount to be Refunded:</b> \$	
				<b>Charged:</b> \$	
<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. 06-2375 under Order No. P02404US0 in the amount of \$ 1,296.00 to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required or credit any overpayment to my Deposit Account No. 06-2375 under order P02404US0. A duplicate copy of this sheet is enclosed.</p>					
<p><b>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.</b></p>					
<p>SEND ALL CORRESPONDENCE TO:</p> <p>Jan K. Simpson FULBRIGHT &amp; JAWORSKI L.L.P. 1301 McKinney, Suite 5100 Houston, Texas 77010-3095 (713) 651-5383</p>					
				<p>SIGNATURE: </p> <p>NAME: Jan K. Simpson</p>	
				33,283	
REGISTRATION NUMBER					

10/088934

**Application Data Sheet**

**Application Information**

Application number::	10/088,934
Application Type::	Regular
Subject Matter::	Utility
Suggested Group Art Unit::	N/A
CD-ROM or CD-R?::	None
Sequence submission?::	Paper
Computer Readable Form (CRF)?::	No
Title::	REINFORCED PACKAGING FOR PRODUCTS WHICH MIGHT FLOW
Attorney Docket Number::	HO-P02404US0
Request for Early Publication?::	No
Request for Non-Publication?::	No
Small Entity?::	No
Petition included?::	No
Secrecy Order in Parent Appl.?::	No

**Applicant Information**

Applicant Authority Type::	Inventor
Primary Citizenship Country::	France
Status::	Full Capacity
Given Name::	<u>Kech-Meng</u>
Family Name::	<u>Kim</u>
City of Residence::	<u>Ferolles</u>
Country of Residence::	France <i>FRX</i>
Street of mailing address::	29 Route de Darvoy
City of mailing address::	Ferolles
Country of mailing address::	France
Postal or Zip Code of mailing address::	45150

**Correspondence Information**

Correspondence Customer Number:: 26,271  
Phone number:: (713) 651-5383  
Fax number:: (713) 651-5246  
E-Mail address:: macosta@fulbright.com

**Representative Information**

Representative Customer Number:: 26,271

**Domestic Priority Information**

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application	National Stage of	PCT/FR00/02461	September 7, 2000

**Foreign Priority Information**

Country::	Application number::	FilingDate::	Priority Claimed::
France	99/11285	September 9, 1999	Yes

**Assignee Information**

Assignee name:: MARS INCORPORATED  
Street of mailing address:: Mars Incorporated  
6885 Elm Street  
City of mailing address:: McLean  
State or Province of mailing address:: VA  
Country of mailing address:: US  
Postal or Zip Code of mailing address:: 22101-3883

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Kech-Meng Kim.

Serial No.: Unknown

Filed: Concurrently

**For: Reinforced Packaging For Products  
Which Might Flow**

www.pearsoned.com

Group No.:

Examiner:

DOCKET NO.: P02404US0

**PRELIMINARY AMENDMENT UNDER 37 C.F.R 1.111**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Dear Sir:

This Preliminary Amendment is being filed concurrently with the national stage filing of PCT/FR00/02461. Applicant requests that the following be entered into the file of the above-referenced application prior to prosecution on the merits of the case.

IN THE CLAIMS:

The following claims have been amended.

3. The device according to *claim 1*, characterized in that projections in the longitudinal median plane of the device of the lateral edges of the pouches are offset relative to each other.

30

4. The device according to claim 1, characterized in that the pouches are of different widths.

5. The device according to claim 1, characterized in that  
35 the means (C) for fixing each reinforcement element to its associated pouch wall also  
fix together integrally the reinforcement element and its associated wall in the  
vicinity of its lateral edges.

6. The device according to *claim 1*, characterized in that  
5 the means (C) for fixing each reinforcement element (21, 22) to its associated pouch wall include bonding the reinforcement element of said wall.

7. The device according to *claim 1*, characterized in that the  
10 reinforcement elements and the pouch walls are bonded together at discrete bonding points.

9. The device according to *claim 8*, characterized in that said at least one continuous adhesive strip extends approximately all the way across said wall.

10. The device according to *claim 1*, characterized in that the  
20 means for fixing each reinforcement element to its associated pouch wall include adjustments to the wall, which can comprise folds or excess thicknesses.

11. The device according to *claim 1*, characterized in  
25 that the lateral ends of the reinforcement elements are connected so as to surround the lateral edges of the pouch or pouches.

12. The device according to *claim 1*, characterized in that the  
30 lateral ends of the reinforcement elements are not connected.

13. The device according to *claim 1*, characterized in  
that the lower ends of the reinforcement elements (21, 22) are connected by a base (23) located under the pouch or pouches.

14. The device according to *claim 1*, characterized in  
35 that the reinforcement elements (21, 22) extend all the way up the pouch or pouches.

15. The device according to *claim 1*, characterized in that the upper ends of the reinforcement elements (21, 22) are connected by a top (24) covering the pouch or pouches.

5 16. The device according to *claim 1*, characterized in that the reinforcement elements (21, 22) include means which engage (210, 220) to re-cover the top of the pouch or pouches once their upper parts have been torn, in order to close the device.

10 17. The device according to *claim 16*, characterized in that said covering means of the pouch or pouches include a tab (210) made from the same material as one (21) of the reinforcement elements, to engage with a slot (220) of the other reinforcement element (22).

15 18. The device according to *claim 1*, characterized in that the reinforcement elements are printed on both their faces.

19. The device according to *claim 1*, characterized in that the reinforcement elements are made of cardboard.

20 20. The device according to *claim 1*, characterized in that at least one reinforcement element includes a tear line (L) along a desired path for opening the device, extending opposite the means (C) for fixing the pouch walls and the reinforcement elements so as to guide the user in tearing the pouch walls.

25 21. The device according to *claim 20* characterized in that each pouch comprises means (E) to weaken its walls, located at the same level as the tear lines of the reinforcement elements.

30 22. The device according to *claim 21*, characterized in that the weakness points of the pouch walls are provided by notches (E) on its lateral edges.

23. The device according to *claim 20* characterized in that said means (C') for fixing adjacent pouch walls are located opposite the tear lines (L) of the reinforcement elements (21', 22').

35 24. The device according to *claim 20* characterized in that the means (C) for fixing the pouch walls to the reinforcement elements include

two lines of adhesive between each reinforcement element and its associated wall, said lines of adhesive being located on either side of the tear line (L) of the reinforcement element.

5           25. The device according to- *claim 10*,           characterized in each pouch of the unit contains a different product.

26. The device according to- *claim 10*,           characterized in that distortion of the reinforcement elements is obtained by arching these elements.

10

27. The device according to- *claim 1*,           characterized in that distortion of the reinforcement elements is obtained by folding these elements.

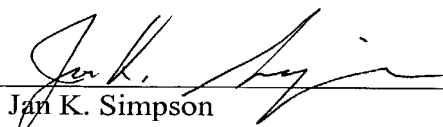


**REMARKS**

The multiple dependency of claims 10, 14-16, and 19-21 has been removed in order to put these claims in a form consistent with U.S. practice. A copy of the claims as amended is attached. Applicant requests that the following be entered into the file of the above-referenced application prior to prosecution on the merits of the case.

Respectfully Submitted,

By: \_\_\_\_\_

  
Jan K. Simpson  
Registration No. 33,283

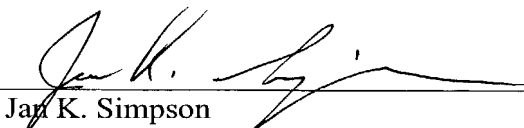
Date: \_\_\_\_\_

3-8-02

FULBRIGHT & JAWORSKI, LLP  
1301 McKinney  
Suite 5100  
Houston, Texas 77010  
Telephone No.: (713) 651-5151  
Facsimile No. : (713) 651-5246

**CERTIFICATE UNDER 37 C.F.R. § 1.8(A)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail EL09849392542 in an envelope addressed to: Commissioner of Patent and Trademarks, Washington, D.C. 20231, on March 8, 2002.

  
Jan K. Simpson  
Registration No. 33,283

**VERSION WITH MARKING TO SHOW CHANGES MADE**

## CLAIMS

## Translation into English of the Annex to the IPER

1. A device for packaging products which might flow, including at least one flexible pouch (10, 10') which is of a generally flattened shape and which has two opposing walls (11, 12) in sheet form extending approximately parallel to a longitudinal median plane (P) of the device, characterized in that it consists of:

5       • at least two flexible pouches arranged the one following the other so that the walls of the pouches are aligned along a direction at least as approximately perpendicular to said median plane (P), the walls of two adjacent pouches of the unit being fixed together by means (C') such as one or more lines of adhesive,

10       • two reinforcement elements (21,22 - 21',22') respectively associated with two respective pouch walls, said reinforcement elements extending at least approximately opposite each other all the way across their associated pouch wall,

      • and means (C) for fixing each reinforcement element to its associated pouch wall at least in a median area of the wall,

15       the two reinforcement elements extending on either side of the device, approximately symmetrically relative to said longitudinal median plane (P) and the rigidity of said reinforcement elements being greater than that of the walls of the pouch or pouches in order to make it easier, after the two respective lateral ends of each of said reinforcement elements have been moved closer together in said median plane (P) so as to distort these reinforcement elements such that their respective  
20       median parts move away from each other, to open the pouch or pouches once its (their) upper part(s) is (are) torn.

2. The device according to claim 1, characterized in that it includes a single pouch (10) the two walls of which are associated with the two respective  
25       reinforcement elements.

3. The device according to <sup>claim 1</sup> ~~one of the previous claims~~, characterized in that projections in the longitudinal median plane of the device of the lateral edges of the pouches are offset relative to each other.

30       4. The device according to <sup>claim 1</sup> ~~one of the previous claims~~, characterized in that the pouches are of different widths.

5. The device according to <sup>claim 1</sup> ~~one of the previous claims~~, characterized in that  
35       the means (C) for fixing each reinforcement element to its associated pouch wall also

fix together integrally the reinforcement element and its associated wall in the vicinity of its lateral edges.

6. The device according to <sup>Claim 1</sup> ~~one of the previous claims~~, characterized in that the means (C) for fixing each reinforcement element (21, 22) to its associated pouch wall include bonding the reinforcement element of said wall.

7. The device according to <sup>Claim 1</sup> ~~the previous claim~~, characterized in that the reinforcement elements and the pouch walls are bonded together at discrete bonding points.

8. The device according to claim 6, characterized in that the reinforcement elements and the pouch walls are bonded together by at least one continuous adhesive strip deposited between each reinforcement element and its associated wall.

9. The device according to <sup>8</sup> ~~the previous~~ claim, characterized in that said at least one continuous adhesive strip extends approximately all the way across said wall.

10. The device according to ~~one of claims 1 to 5~~, characterized in that the means for fixing each reinforcement element to its associated pouch wall include adjustments to the wall, which can comprise folds or excess thicknesses.

11. The device according to <sup>Claim 1</sup> ~~any one of the previous claims~~, characterized in that the lateral ends of the reinforcement elements are connected so as to surround the lateral edges of the pouch or pouches.

12. The device according to ~~one of claims 1 to 10~~, characterized in that the lateral ends of the reinforcement elements are not connected.

13. The device according to <sup>Claim 1</sup> ~~any one of the previous claims~~, characterized in that the lower ends of the reinforcement elements (21, 22) are connected by a base (23) located under the pouch or pouches.

14. The device according to <sup>Claim 1</sup> ~~any one of the previous claims~~, characterized in that the reinforcement elements (21, 22) extend all the way up the pouch or pouches.

15. The device according to <sup>Claim 1</sup> ~~any one of the previous claims~~, characterized in that the upper ends of the reinforcement elements (21, 22) are connected by a top (24) covering the pouch or pouches.

5 16. The device according to <sup>Claim 1</sup> ~~any one of the previous claims~~, characterized in that the reinforcement elements (21, 22) include means which engage (210, 220) to re-cover the top of the pouch or pouches once their upper parts have been torn, in order to close the device.

10 17. The device according to <sup>16</sup> ~~the previous claim~~, characterized in that said covering means of the pouch or pouches include a tab (210) made from the same material as one (21) of the reinforcement elements, to engage with a slot (220) of the other reinforcement element (22).

15 18. The device according to <sup>Claim 1</sup> ~~any one of the previous claims~~, characterized in that the reinforcement elements are printed on both their faces.

20 19. The device according to <sup>Claim 1</sup> ~~any one of the previous claims~~, characterized in that the reinforcement elements are made of cardboard.

20 20. The device according to <sup>Claim 1</sup> ~~any one of the previous claims~~, characterized in that at least one reinforcement element includes a tear line (L) along a desired path for opening the device, extending opposite the means (C) for fixing the pouch walls and the reinforcement elements so as to guide the user in tearing the pouch walls.

25 21. The device according to <sup>20</sup> ~~the previous claim~~, characterized in that each pouch comprises means (E) to weaken its walls, located at the same level as the tear lines of the reinforcement elements.

30 22. The device according to <sup>21</sup> ~~the previous claim~~, characterized in that the weakness points of the pouch walls are provided by notches (E) on its lateral edges.

35 23. The device according to <sup>Claim 20</sup> ~~one of the three previous claims~~, characterized in that said means (C') for fixing adjacent pouch walls are located opposite the tear lines (L) of the reinforcement elements (21', 22').

24. The device according to <sup>Claim 20</sup> ~~one of the four previous claims~~, characterized in that the means (C) for fixing the pouch walls to the reinforcement elements include

5

10

27. The device according to ~~one of claims 1 to 25~~, characterized in that distortion of the reinforcement elements is obtained by folding these elements.

**CURRENT PENDING CLAIMS**

## CLAIMS

## Translation into English of the Annex to the IPER

1. A device for packaging products which might flow, including at least one flexible pouch (10, 10') which is of a generally flattened shape and which has two opposing walls (11, 12) in sheet form extending approximately parallel to a longitudinal median plane (P) of the device, characterized in that it consists of:

5       • at least two flexible pouches arranged the one following the other so that the walls of the pouches are aligned along a direction at least as approximately perpendicular to said median plane (P), the walls of two adjacent pouches of the unit being fixed together by means (C') such as one or more lines of adhesive,

10       • two reinforcement elements (21,22 - 21',22') respectively associated with two respective pouch walls, said reinforcement elements extending at least approximately opposite each other all the way across their associated pouch wall,

      • and means (C) for fixing each reinforcement element to its associated pouch wall at least in a median area of the wall,

15       the two reinforcement elements extending on either side of the device, approximately symmetrically relative to said longitudinal median plane (P) and the rigidity of said reinforcement elements being greater than that of the walls of the pouch or pouches in order to make it easier, after the two respective lateral ends of each of said reinforcement elements have been moved closer together in said median plane (P) so as to distort these reinforcement elements such that their respective  
20       median parts move away from each other, to open the pouch or pouches once its (their) upper part(s) is (are) torn.

2. The device according to claim 1, characterized in that it includes a single pouch (10) the two walls of which are associated with the two respective  
25       reinforcement elements.

3. The device according to *claim 1*, characterized in that projections in the longitudinal median plane of the device of the lateral edges of the pouches are offset relative to each other.  
30

4. The device according to *claim 1*, characterized in that the pouches are of different widths.

5. The device according to *claim 1*, characterized in that  
35       the means (C) for fixing each reinforcement element to its associated pouch wall also



fix together integrally the reinforcement element and its associated wall in the vicinity of its lateral edges.

5 6. The device according to *claim 1*, characterized in that the means (C) for fixing each reinforcement element (21, 22) to its associated pouch wall include bonding the reinforcement element of said wall.

10 7. The device according to *claim 1*, characterized in that the reinforcement elements and the pouch walls are bonded together at discrete bonding points.

15 8. The device according to claim 6, characterized in that the reinforcement elements and the pouch walls are bonded together by at least one continuous adhesive strip deposited between each reinforcement element and its associated wall.

9. The device according to *claim 8*, characterized in that said at least one continuous adhesive strip extends approximately all the way across said wall.

20 10. The device according to *claim 1*, characterized in that the means for fixing each reinforcement element to its associated pouch wall include adjustments to the wall, which can comprise folds or excess thicknesses.

25 11. The device according to *claim 1*, characterized in that the lateral ends of the reinforcement elements are connected so as to surround the lateral edges of the pouch or pouches.

30 12. The device according to *claim 1*, characterized in that the lateral ends of the reinforcement elements are not connected.

13. The device according to *claim 1*, characterized in that the lower ends of the reinforcement elements (21, 22) are connected by a base (23) located under the pouch or pouches.

35 14. The device according to *claim 1*, characterized in that the reinforcement elements (21, 22) extend all the way up the pouch or pouches.

15. The device according to *claim 1*, characterized in that the upper ends of the reinforcement elements (21, 22) are connected by a top (24) covering the pouch or pouches.

5 16. The device according to *claim 1*, characterized in that the reinforcement elements (21, 22) include means which engage (210, 220) to re-cover the top of the pouch or pouches once their upper parts have been torn, in order to close the device.

10 17. The device according to *claim 16*, characterized in that said covering means of the pouch or pouches include a tab (210) made from the same material as one (21) of the reinforcement elements, to engage with a slot (220) of the other reinforcement element (22).

15 18. The device according to *claim 1*, characterized in that the reinforcement elements are printed on both their faces.

19. The device according to *claim 1*, characterized in that the reinforcement elements are made of cardboard.

20 20. The device according to *claim 1*, characterized in that at least one reinforcement element includes a tear line (L) along a desired path for opening the device, extending opposite the means (C) for fixing the pouch walls and the reinforcement elements so as to guide the user in tearing the pouch walls.

25 21. The device according to *claim 20* characterized in that each pouch comprises means (E) to weaken its walls, located at the same level as the tear lines of the reinforcement elements.

30 22. The device according to *claim 21*, characterized in that the weakness points of the pouch walls are provided by notches (E) on its lateral edges.

23. The device according to *claim 20* characterized in that said means (C') for fixing adjacent pouch walls are located opposite the tear lines (L) of the reinforcement elements (21', 22').

35 24. The device according to *claim 20* characterized in that the means (C) for fixing the pouch walls to the reinforcement elements include

two lines of adhesive between each reinforcement element and its associated wall, said lines of adhesive being located on either side of the tear line (L) of the reinforcement element.

5           25. The device according to- *Claim 10*,           characterized in each pouch of the unit contains a different product.

26. The device according to- *Claim 10*,           characterized in that distortion of the reinforcement elements is obtained by arching these elements.

10

27. The device according to- *Claim 1*,           characterized in that distortion of the reinforcement elements is obtained by folding these elements.

5/pyls

1

REINFORCED PACKAGING FOR PRODUCTS WHICH MIGHT FLOW

The present invention relates to packaging devices. More particularly, the invention relates to a device for packaging products, which, since they do not take the form of a single solid block, may flow. These products may for example be in paste, granular or liquid form.

5 Numerous devices for packaging products of this kind are known. The main types used may be classified into two main families:

- rigid devices (food tins, bottles, canisters, drinks cans etc). Devices of this type are very widely used but have the drawback of having, when they are emptied of their contents, the same space requirement as when they are full. Moreover, the  
10 cost price of these devices, which are often made of steel or of aluminium, is relatively high,

- flexible devices (pouches in particular), generally formed by the sealed jointing (for example by welding) of two flexible sheets based on a plastic material. Pouches of this kind are commonly used for example for packaging food (animal  
15 food, cocktail biscuits) or liquids (washing up liquid particularly). Depending on the nature of the product to be packaged, the composition of the pouch sheets may vary: for example, to package animal food which must be preserved from infiltration from the outer atmosphere, these sheets are made by inserting a layer of a sealing material (such as aluminium) between two layers of plastic material which provide the  
20 mechanical strength of the pouch. The outer surface of these pouches is generally printed in order to display information presenting and promoting the product.

Among the types of packaging devices mentioned above pouches constitute a simple and cost-effective packaging, which additionally has the advantage of having a small space requirement once emptied of its contents, which is advantageous from  
25 the practical point of view.

However, pouches also comprise some drawbacks:

- firstly, once the pouch is open, generally by cutting off its upper part (by means of scissors, or by hand along lines of weakening of the pouches provided for that purpose), the flexibility of the sheets constituting the pouch may make it difficult  
30 to manipulate. In particular, it may be tricky to keep the pouch open and to dispense its contents properly, the two opposing sheets tending to become twisted,

- secondly, the flexibility of the pouch means that it tends to collapse onto itself, which complicates the storage and presentation of these pouches, particularly on the shelves of shops where an advantageous presentation of the product is  
35 required,

• thirdly, in some cases the user may experience in a negative way too “direct” a contact of the hand with the contents of the pouch (in particular in the case of animal food which may comprise solid pieces embedded in a fluid or viscose mixture),

5       • fourthly, the graphic printing on the external surface of the pouch often requires substantial printing machine setup time, which increases the unit cost price of the pouches,

• Lastly, known devices generally comprise only a single pouch.

10       The aim of the invention is to make it possible to produce packaging using a pouch, freed from the drawbacks cited above which are inherent in known pouches.

In fulfilment of this aim, the invention proposes a device for packaging products which might flow, including at least one flexible pouch which is of a generally flattened shape and which has two opposing walls in sheet form extending approximately parallel to a longitudinal median plane of the device, a device  
15       characterized in that it consists of:

- at least one flexible pouch,
- two reinforcement elements respectively associated with two respective pouch walls, said reinforcement elements extending at least approximately opposite each other all the way across their associated pouch wall,
- 20       • and means for fixing each reinforcement element to its associated pouch wall at least in a median area of the wall,

the two reinforcement elements extending on either side of the device, approximately symmetrically relative to said longitudinal median plane and the rigidity of said reinforcement elements being greater than that of the walls of the  
25       pouch or pouches in order to make it easier, after the two respective lateral ends of each of said reinforcement elements have been moved closer together in said median plane so as to distort these reinforcement elements such that their respective median parts move away from each other, to open the pouch or pouches once its (their) upper part(s) is (are) torn.

30       Preferred but non-restrictive aspects of the device according to the invention are as follows:

- the device comprises a single pouch the two walls of which are associated with the two respective reinforcement elements,
- the device comprises at least two pouches arranged one after the other so  
35       that the walls of the pouches are aligned along a direction at least approximately perpendicular to said median plane, and the walls of two adjacent pouches of the unit are fixed together by means such as one or more lines of adhesive,

- projections in the longitudinal median plane of the device of the lateral edges of the pouches are offset relative to each other,
- the pouches are of different widths,
- the means for fixing each reinforcement element to its associated pouch wall also fix together integrally the reinforcement element and its associated wall in the vicinity of its lateral edges,
- the means for fixing each reinforcement element to its associated pouch wall include bonding the reinforcement element of said wall,
- the reinforcement elements and the pouch walls are bonded together at discrete bonding points,
- the reinforcement elements and the pouch walls are bonded together by at least one continuous adhesive strip deposited between each reinforcement element and its associated wall,
- said at least one continuous adhesive strip extends approximately all the way across said wall,
- the means for fixing each reinforcement element to its associated pouch wall include adjustments to the wall, which can comprise folds or excess thicknesses,
- the lateral ends of the reinforcement elements are connected so as to surround the lateral edges of the pouch or pouches,
- the lateral ends of the reinforcement elements are not connected,
- the lower ends of the reinforcement elements are connected by a base located under the pouch or pouches,
- the reinforcement elements extend all the way up the pouch or pouches,
- the upper ends of the reinforcement elements are connected by a top covering the pouch or pouches,
- the reinforcement elements include means which engage so as to re-cover the top of the pouch or pouches once their upper parts have been torn, in order to close the device,
- said covering means of the pouch or pouches include a tab made from the same material as one of the reinforcement elements, to engage with a slot of the other reinforcement element,
- the reinforcement elements are printed on both their faces,
- the reinforcement elements are made of cardboard,
- at least one reinforcement element includes a tear line along a desired path for opening the device, extending opposite the means for fixing the pouch walls to the reinforcement elements so as to guide the user in tearing the pouch walls,
- each pouch comprises means to weaken its walls, located at the same level as the tear line of the reinforcement elements,







median parts. In the interests of clarity, the hand of the user is only shown in figure 2a.

5 The two opposing walls 11, 12 of the pouch being bonded respectively to the two reinforcement elements 21 and 22 in their median area, this separation causes a controlled opening of the pouch, after its upper end has been torn. It is then possible to handle the packaging device reliably, and in particular to dispense the contained product effectively.

10 It is important to note here that the reinforcement elements 21 and 22 may be bonded onto the pouch walls by a continuous adhesive strip covering all or part of the width of the pouch wall, or by the application at discrete places of bonding points (for example by depositing on each pouch wall a bonding point in its middle, surrounded by two lateral bonding points). In every circumstance, it is important according to the invention for at least the median area of each pouch wall to be bonded to the associated reinforcement element.

15 Additionally, each reinforcement element will to advantage be bonded to its associated pouch wall also at the level of the two lateral edges of the pouch, in order to increase the coherence of the unit and to make it even easier to open the pouch.

Bonding the two reinforcement elements 21 and 22 onto the opposing walls of the pouch means that handling and using the pouch is made reliable.

20 A material will preferably be selected for these reinforcement elements 21 and 22 which has sufficient resilience for these reinforcement elements after several opening manipulations to resume naturally their original shape corresponding to figure 2a.

25 Figure 3a shows a diagrammatic view from above of a pouch 10 surrounded by two reinforcement elements 21 and 22 which are bonded to it; in this figure, it will be noted that the two reinforcement elements 21 and 22 are disconnected, whereas in figure 3b which is a similar representation of an alternative embodiment, the ends of the two reinforcement elements 21 and 22 are joined together. It is thus possible to associate with the pouch reinforcement elements 21 and 22 in the form of two different flexible strips, or else of a single sleeve surrounding the pouch without discontinuity.

Figures 4a to 4c show three embodiment variants, able to be implemented with each of the two embodiments shown in figures 3a and 3b.

35 In figure 4a, the lower ends of the reinforcement elements 21 and 22 are located underneath the pouch and are joined together by a horizontal base 23 made of the same material as these reinforcement elements. This embodiment variant makes it possible to equip the device with a stable base and so to overcome the drawback of pouch instability mentioned in the introduction to this text.

It will also be noted that the fact of covering the pouch surface all the way up with the semi-rigid frame formed by the reinforcement elements 21 and 22 makes it possible to offer to the hand of the user a "smoother" contact than that of the "crude" pouch, which may be required for some products.

5 In figure 4b, the reinforcement elements 21 and 22 extend all the way up the pouch, but their lower ends are disconnected: this variant corresponds to the case where the pouch is simply "sandwiched" between two flexible sides (embodiment in figure 3a), or surrounded by a sheath open at its two ends, and to the walls of which the pouch is bonded (embodiment in figure 3b).

10 In figure 4c, the two reinforcement elements 21 and 22 have disconnected lower ends but their upper end is covered by a part 24 made from the same material.

It is possible according to the invention to completely surround the pouch with a carton comprising a base and a top.

15 It is also possible to provide in the reinforcement elements 21 and 22 folds, bellows or cuts in order to make possible the manipulation described with reference to figures 2a and 2b even in the presence of a relatively rigid base and/or top.

The main function of the reinforcement elements 21 and 22 is, as has been said, to allow the pouch to be opened reliably. These elements also have the advantage of being able to be used as a graphic surface to display information about the product or promotional data.

20 In this respect, it will be noted that printing on a material such as cardboard requires an appreciably smaller amount of machine adjustment time compared with the synthetic films which usually constitute known pouches; it is thus possible, in particular where the reinforcement elements 21 and 22 extend all the way up the pouch, not to print on the pouch wall, but only on the reinforcement elements which surround it. It will additionally be noted that it is possible to print on both faces of each reinforcement element 21 and 22, which considerably increases the graphically usable service of the device.

25 Figures 5a and 5b show a packaging device according to the invention, corresponding to the configurations in figures 3b and 4b (lateral ends of the reinforcement elements joined together at least at points and lower ends of these reinforcement elements joined together by a base). It will be noted that the reinforcement elements have here been cut so as to have a characteristic appearance (cat head); in the event this is a device containing cat food. Each of the two upper corners of the reinforcement element (which corresponds to a cat ear) is bonded to the corner of the reinforcement element located opposite, to increase the rigidity of the device.



According to the invention, tearing the upper part of the pouch is thus made easier and more reliable, by bonding to advantage the pouch walls to the support elements at the same height as the tear lines of the reinforcement elements.

Indeed, this arrangement makes it possible to guide the tearing of the pouch  
5 by hand and so to make opening the device more reliable.

As was said at the beginning of this text, known pouches may include opening means such as a weakening line (which might be made for example by laser beam etching of the pouch sheet so as to reduce its thickness).

It will be noted that according to the invention two notches may be simply  
10 provided located on the opposing edges of the pouch, at the same height as the  
weakening lines of the reinforcement elements and as the bonding of the pouch onto  
these elements.

Such notches E are shown in figure 7b, in which the upper parts of each reinforcement element 21' and 22' have been shown diagrammatically with their  
15 weakening line L surrounded by their two lines of adhesive C.

This arrangement thus makes it possible to remove one stage in the process of manufacturing the device (such as a stage of etching the pouch walls by laser beam), which allows the pouch cost price to be reduced.

It should also be noted that the two lines of adhesive C constitute a “channel” which frames the desired place for tearing the walls of the pouch and thus plays a part in guiding this tearing, the two lines of adhesive constituting obstacles to the tear lines of the pouch walls.

The design of the device according to the invention may also be adapted in such a way that tear lines of the reinforcement elements defining the path for opening the device are adapted to the selected application: indeed it will thus be possible to have a rectilinear opening path but also a curvilinear one, or even a path according to any required design.

It is obvious that according to the invention it is possible to fix each reinforcement element 21, 22 to its associated pouch face by any known means other than bonding; for example the reinforcement elements might be engaged in adjustments (which might for example include pouch wall parts extending beyond welded edges of said pouch and folded back on themselves, or again excess thicknesses associated with an opening for the reinforcement elements to pass through) of the pouch walls, or else these elements might be welded together.

35 Referring now to figures 8a to 8e, one particular embodiment of the invention has been shown in which the device contains not one but two pouches 10 and 10'.

As shown particularly in figures 8c and 8e, in this embodiment of the invention the two pouches 10 and 10' are bonded together by two lines of adhesive

C' which approximately cover the lateral extent of the surface on which the two pouches are opposite one another. In figures 8d and 8e has also been shown the longitudinal median plane P of the device, the pouches being aligned approximately perpendicular to this plane.

5 Each pouch furthermore is bonded to a reinforcement element (element 21' for the pouch 10', 22' for the pouch 10) by two lines of adhesive C similar to those in figure 7c, and which here again frame a tear line L of the reinforcement element. The reinforcement elements are, as in the case of the device with a single pouch, arranged symmetrically relative to the plane P (in other words opposite each other, and at the  
10 same height).

It will be noted that in order to facilitate opening the pouches, simultaneously to the tearing of the upper parts of the reinforcement elements 21' and 22', the lateral edges of the two pouches 10 and 10' are not opposite one another, but on the contrary that their projections in the longitudinal median plane of the device are  
15 offset (see in particular figures 8a and 8d).

Thus, when opening the device only a single edge of the pouch is attacked at one and the same time. Pouches of different width are also conceivable (as shown in figures 8a and 8d particularly) in order again to facilitate opening.

It will additionally be noted that here again the lateral edges of the pouches  
20 comprise notches E located opposite the tear lines of the reinforcement elements, in order to make opening the device reliable.

This second embodiment makes it possible to package in a single device products with different characteristics. It will be possible for example in an application for packaging human food to fill one of the pouches with pieces of meat  
25 with or without sauce, while the other pouch contains rice or accompanying vegetables. Thus the possibility is offered of providing the consumer with several products, constituting a combination dish, in a same device.

It is understood that the embodiment in figures 8a to 8e, which includes two pouches (and which may also include according to this embodiment of the invention  
30 any number of them) has among others the following advantages:

- it makes it possible to serve at one and the same time at least two products, each product being packaged in a separate pouch, the two products being able to have different characteristics and/or functions. It may also be possible to conceive of incorporating into the two respective pouches food with different tastes (for example  
35 ravioli and parmesan cheese respectively), different textures (for example in a first pouch meats cooked in sauce and steamed vegetables or cereals; and in a general way wet products in one pouch, and dry products in the other pouch), or even two different functions (one pouch being able to contain a food such as a complete

cooked dish, the other pouch being able to contain a product such as a medicine). And in a more general way, the two (or more) pouches may contain products or chemical compounds to be mixed before use,

• additionally, each product packaged separately in a pouch may retain its intrinsic characteristics before the pouch is opened and the respective products, which it contains, are mixed together. In this respect, it will be noted that it is also possible to subject a pouch containing a specific product and having already been re-closed to different treatments (sterilization, preservation treatments etc), and to join this first pouch to a second pouch not having been subjected to the same treatment so as to constitute a device such as shown in figures 8a to 8e,

• such a device is also practical since it allows the different pouches it includes to be opened at one of the same time (and from this point of view offsetting the ends of the lateral edges of the pouch is particularly advantageous),

• this device also has a high degree of safety, since it allows the manufacturer to incorporate in the different pouches the exact quantities of product which are to be mixed together, and to adapt these quantities as a function of the pouch batches to be associated,

• lastly, such a device is also advantageous in terms of presentation since it allows the respective products contained in the respective pouches side by side to be dispensed into a same receptacle if it is decided to dispense these products through the lateral edge of the pouches, and it is also possible to dispense these products forming superposed layers in the receptacle receiving the content of the pouches by the products dispensing on the contrary through the middle of the lateral faces of the superposed pouches.

It is thus possible depending on opening to conceive of any number of pouches aligned in series and bonded together in twos by their adjacent walls, preferably at the same height as notches of their lateral edges, surrounded by two reinforcement elements also bonded (or fixed to the pouches by any other known means), the reinforcement elements being able to comprise tear lines. The reinforcement elements may also in this case not comprise tear lines, the pouches then being able to be equipped with opening means such as weakening lines made by laser etching.

Clearly, the characteristics described with reference to figures 1a to 6d (devices comprising a single pouch) also apply to devices with two or more pouches: lateral edges of the reinforcement elements joined or disconnected, bottom and/or top to join the two reinforcement elements together, closure tab etc.

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JC13 Rec'd PCT/PTO 08 MAR 2002

# CLAIMS

## Translation into English of the Annex to the IPER

1. A device for packaging products which might flow, including at least one flexible pouch (10, 10') which is of a generally flattened shape and which has two opposing walls (11, 12) in sheet form extending approximately parallel to a longitudinal median plane (P) of the device, characterized in that it consists of:

- 5       • at least two flexible pouches arranged the one following the other so that the walls of the pouches are aligned along a direction at least as approximately perpendicular to said median plane (P), the walls of two adjacent pouches of the unit being fixed together by means (C') such as one or more lines of adhesive,
- 10       • two reinforcement elements (21,22 – 21',22') respectively associated with two respective pouch walls, said reinforcement elements extending at least approximately opposite each other all the way across their associated pouch wall,
- and means (C) for fixing each reinforcement element to its associated pouch wall at least in a median area of the wall,

15       the two reinforcement elements extending on either side of the device, approximately symmetrically relative to said longitudinal median plane (P) and the rigidity of said reinforcement elements being greater than that of the walls of the pouch or pouches in order to make it easier, after the two respective lateral ends of each of said reinforcement elements have been moved closer together in said median plane (P) so as to distort these reinforcement elements such that their respective  
20       median parts move away from each other, to open the pouch or pouches once its (their) upper part(s) is (are) torn.

2. The device according to claim 1, characterized in that it includes a single  
25       pouch (10) the two walls of which are associated with the two respective reinforcement elements.

3. The device according to one of the previous claims, characterized in that  
30       projections in the longitudinal median plane of the device of the lateral edges of the pouches are offset relative to each other.

4. The device according to one of the previous claims, characterized in that  
      the pouches are of different widths.

5. The device according to one of the previous claims, characterized in that  
35       the means (C) for fixing each reinforcement element to its associated pouch wall also

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fix together integrally the reinforcement element and its associated wall in the vicinity of its lateral edges.

5       6. The device according to one of the previous claims, characterized in that the means (C) for fixing each reinforcement element (21, 22) to its associated pouch wall include bonding the reinforcement element of said wall.

10       7. The device according to the previous claim, characterized in that the reinforcement elements and the pouch walls are bonded together at discrete bonding points.

15       8. The device according to claim 6, characterized in that the reinforcement elements and the pouch walls are bonded together by at least one continuous adhesive strip deposited between each reinforcement element and its associated wall.

      9. The device according to the previous claim, characterized in that said at least one continuous adhesive strip extends approximately all the way across said wall.

20       10. The device according to one of claims 1 to 5, characterized in that the means for fixing each reinforcement element to its associated pouch wall include adjustments to the wall, which can comprise folds or excess thicknesses.

25       11. The device according to any one of the previous claims, characterized in that the lateral ends of the reinforcement elements are connected so as to surround the lateral edges of the pouch or pouches.

30       12. The device according to one of claims 1 to 10, characterized in that the lateral ends of the reinforcement elements are not connected.

      13. The device according to any one of the previous claims, characterized in that the lower ends of the reinforcement elements (21, 22) are connected by a base (23) located under the pouch or pouches.

35       14. The device according to any one of the previous claims, characterized in that the reinforcement elements (21, 22) extend all the way up the pouch or pouches.



15. The device according to any one of the previous claims, characterized in that the upper ends of the reinforcement elements (21, 22) are connected by a top (24) covering the pouch or pouches.

5           16. The device according to any one of the previous claims, characterized in that the reinforcement elements (21, 22) include means which engage (210, 220) to re-cover the top of the pouch or pouches once their upper parts have been torn, in order to close the device.

10           17. The device according to the previous claim, characterized in that said covering means of the pouch or pouches include a tab (210) made from the same material as one (21) of the reinforcement elements, to engage with a slot (220) of the other reinforcement element (22).

15           18. The device according to any one of the previous claims, characterized in that the reinforcement elements are printed on both their faces.

            19. The device according to any one of the previous claims, characterized in that the reinforcement elements are made of cardboard.

20

            20. The device according to any one of the previous claims, characterized in that at least one reinforcement element includes a tear line (L) along a desired path for opening the device, extending opposite the means (C) for fixing the pouch walls and the reinforcement elements so as to guide the user in tearing the pouch walls.

25

            21. The device according to the previous claim, characterized in that each pouch comprises means (E) to weaken its walls, located at the same level as the tear lines of the reinforcement elements.

30

            22. The device according to the previous claim, characterized in that the weakness points of the pouch walls are provided by notches (E) on its lateral edges.

35

            23. The device according to one of the three previous claims, characterized in that said means (C') for fixing adjacent pouch walls are located opposite the tear lines (L) of the reinforcement elements (21', 22').

            24. The device according to one of the four previous claims, characterized in that the means (C) for fixing the pouch walls to the reinforcement elements include

5           25. The device according to one of the previous claims, characterized in each  
pouch of the unit contains a different product.

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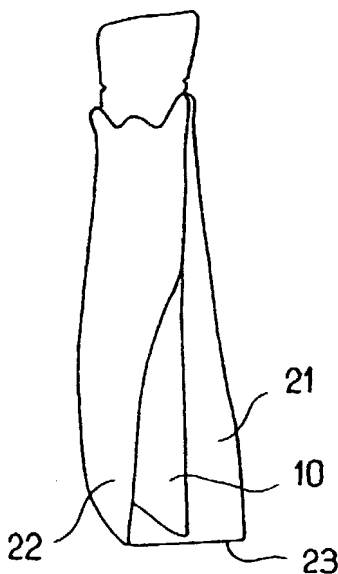
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- (71) Déposant (pour tous les États désignés sauf US): UNIS-ABI [FR/FR]; Lieudit "St. Nicolas", F-45550 Saint-Denis-de-l'Hôtel (FR).
- (72) Inventeur; et
- (75) Inventeur/Déposant (pour US seulement): KIM, Kech-Meng [FR/FR]; 29, route de Darvoy, F-45150 Ferolles (FR).
- (74) Mandataires: MARTIN, Jean-Jacques etc.; Cabinet Regimbeau, 26, avenue Kléber, F-75116 Paris (FR).
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[Suite sur la page suivante]

(54) Title: PACKAGING FOR PRODUCTS LIKELY TO FLOW

(54) Titre: EMBALLAGE RENFORCE POUR PRODUITS POUVANT S'ÉCOULER



(57) Abstract: The invention concerns a device for packaging products likely to flow, comprising at least a soft three-side seal pouch (10) having a generally flat shape and comprising two opposite walls in sheet form extending substantially parallel to a median longitudinal plane of the device. Said device is characterised in that it consists of: at least a soft three-side seal pouch, two reinforcing elements (21, 22) respectively associated with each of the two walls of the pouch, said reinforcing elements extending at least substantially opposite the whole width of their associated pouch wall, and means for making integral each reinforcing element and its associated pouch wall at least in a median zone of the wall, the two reinforcing elements extending on either side of the device, substantially symmetrically relative to said median longitudinal plane and the rigidity of said reinforcing elements being greater than that of the walls of the pouch or pouches so as to facilitate, after the two respective lateral ends of each of the reinforcing elements have been brought together in said median longitudinal plane to deform said reinforcing elements so that their respective median portions are spaced apart from each other, the opening of one or several pouches once the high part(s) thereof has/have been torn.

(57) Abrégé: Dispositif de conditionnement de produits pouvant s'écouler, comprenant au moins un pochon souple (10) qui est de forme généralement aplatie et qui possède deux parois opposées en forme de feuille s'étendant sensiblement parallèlement à un plan longitudinal médian du dispositif, dispositif caractérisé en ce qu'il consiste en: au moins un pochon souple, deux éléments de renfort (21, 22) associés respectivement à deux parois de pochon respectives, lesdits éléments de renfort s'étendant au moins sensiblement en regard de toute la largeur de leur paroi de pochon associée, et des moyens pour solidariser chaque élément de renfort et sa paroi de pochon associée au moins dans

une région médiane de la paroi, les deux éléments de renfort s'étendant de part et d'autre du dispositif, sensiblement symétriquement par rapport audit plan longitudinal médian et la rigidité desdits éléments de renfort étant supérieure à celle des parois du ou des pochons afin de faciliter, suite à un rapprochement des deux extrémités latérales respectives de chacun desdits éléments de renfort dans ledit plan médian pour déformer ces éléments de renfort de sorte que leurs parties médianes respectives s'éloignent l'une de l'autre, l'ouverture du ou des pochons une fois la (les) partie(s) haute(s) de celui-ci (ceux-ci) déchirée(s).

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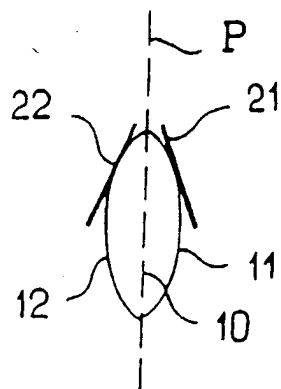


FIG. 1a

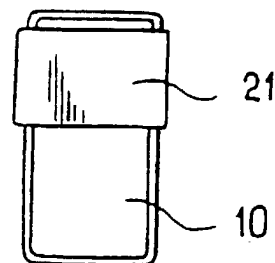


FIG. 1b

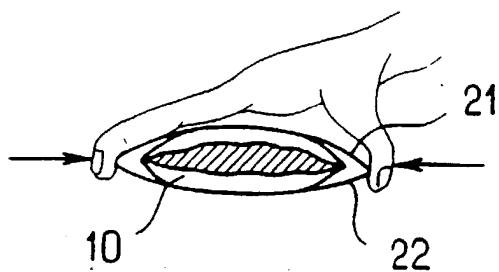


FIG. 2a

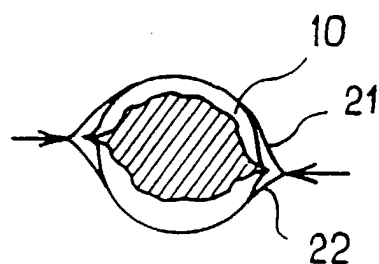


FIG. 2b

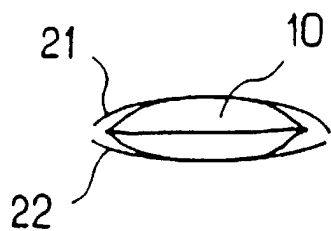


FIG. 3a

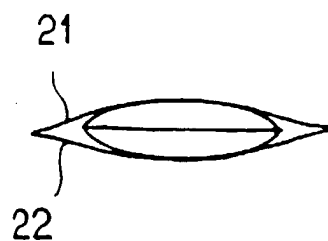


FIG. 3b

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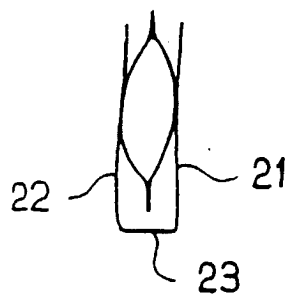


FIG. 4a

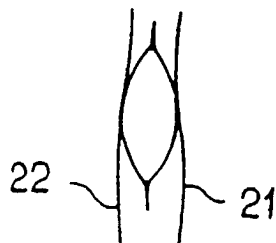


FIG. 4b

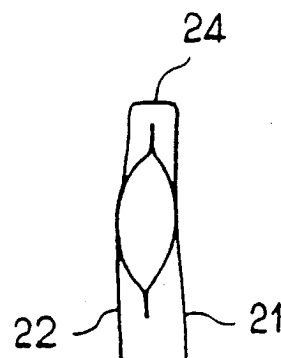


FIG. 4c

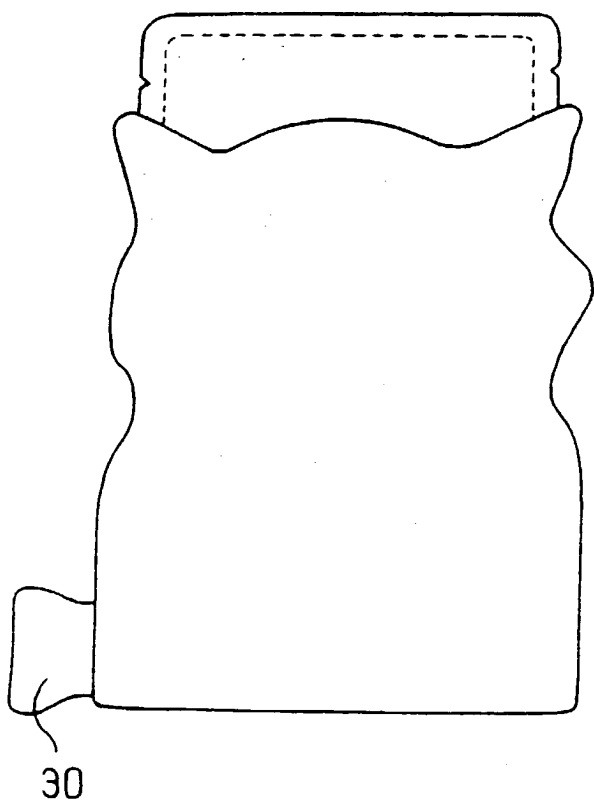


FIG. 5a

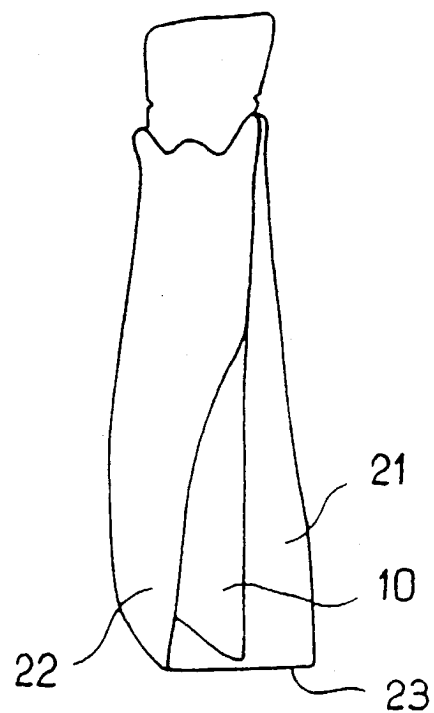


FIG. 5b

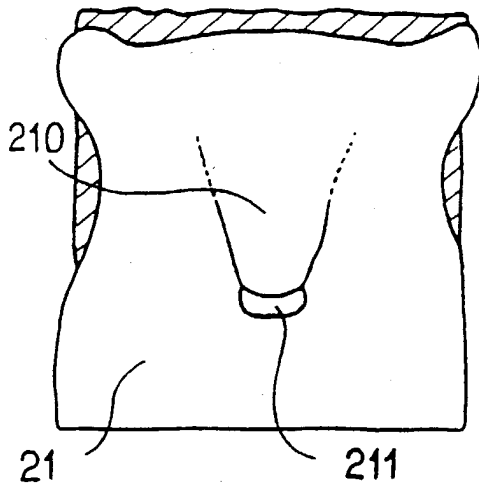


FIG. 6a

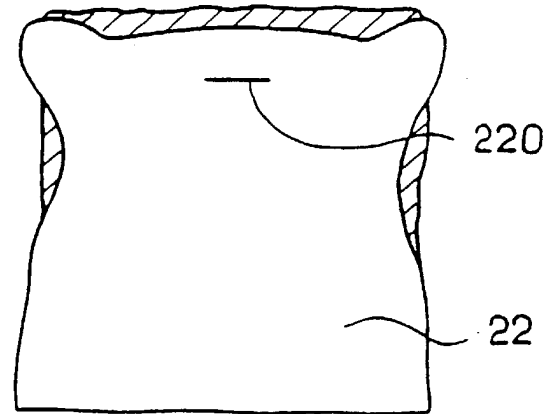


FIG. 6b

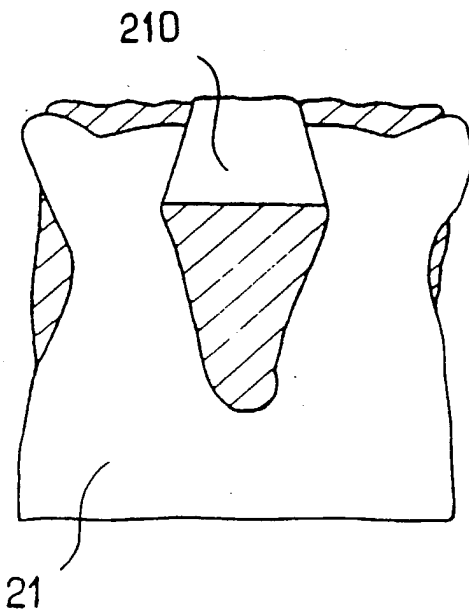


FIG. 6c

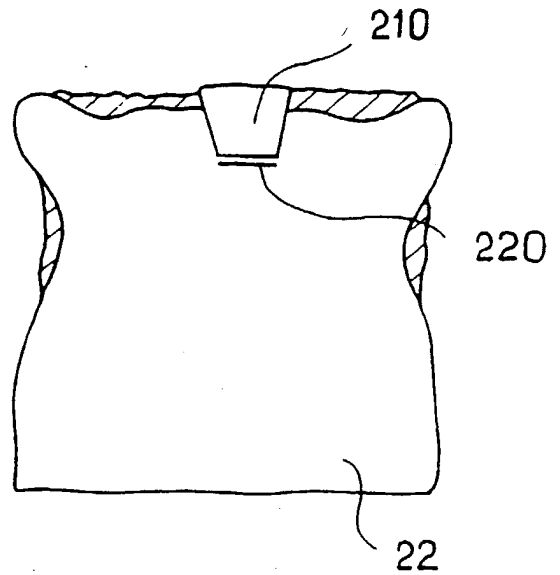


FIG. 6d

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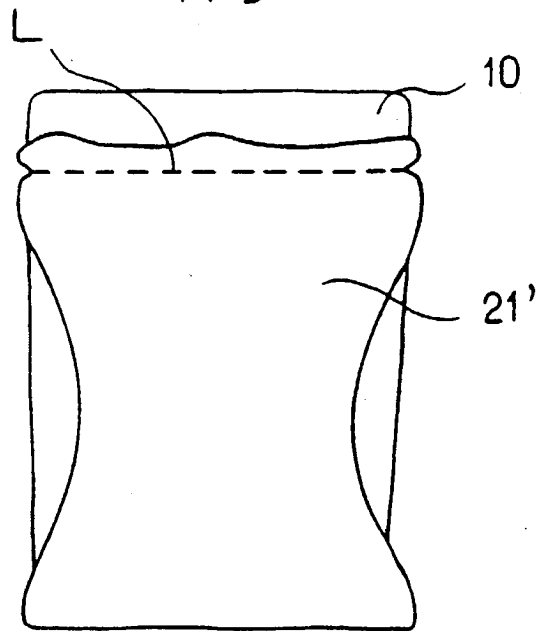


FIG. 7a

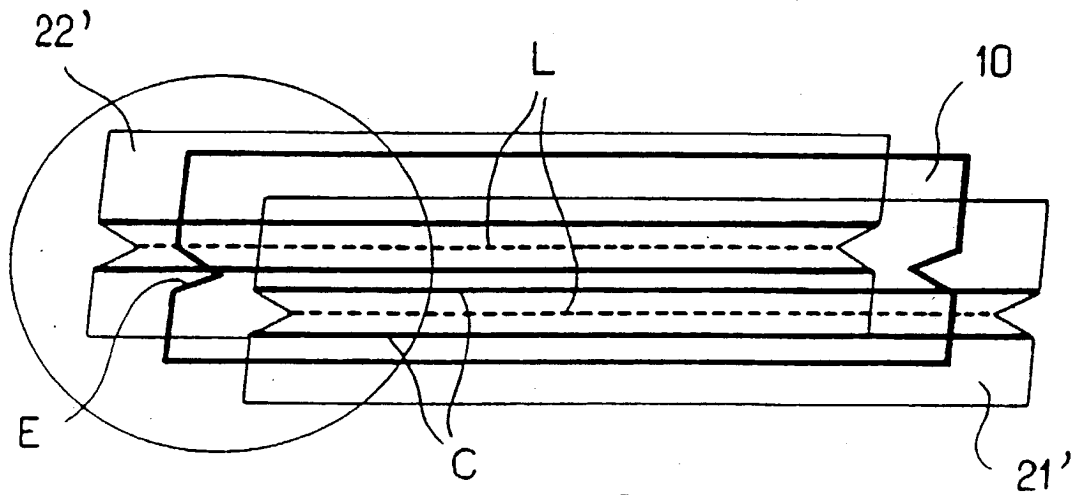


FIG. 7b

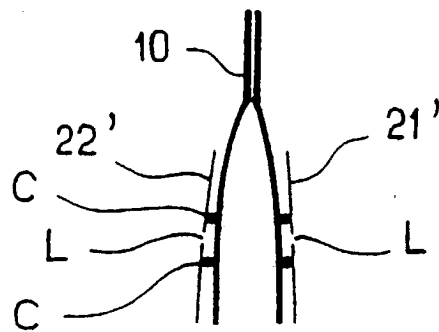


FIG. 7c

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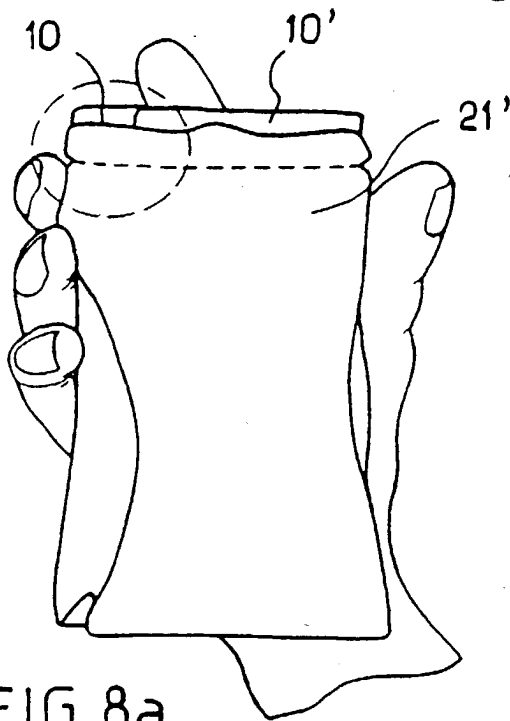


FIG. 8a

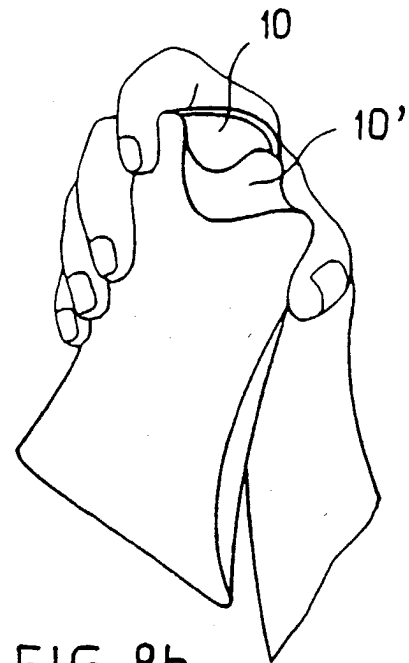


FIG. 8b

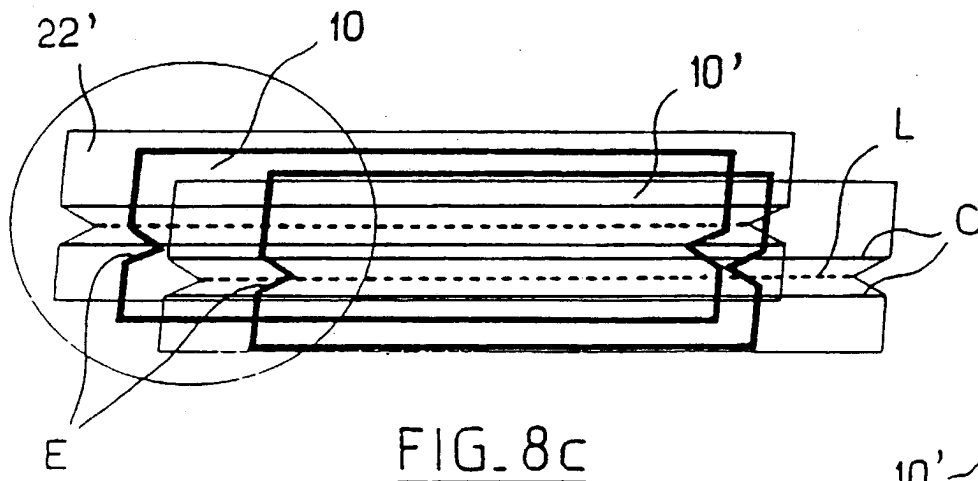


FIG. 8c

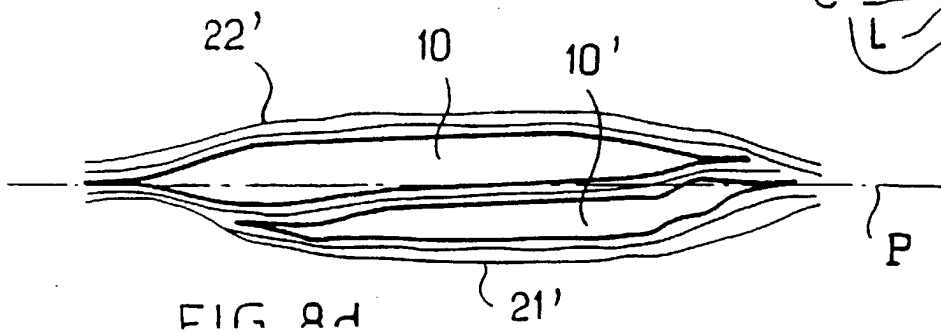


FIG. 8d

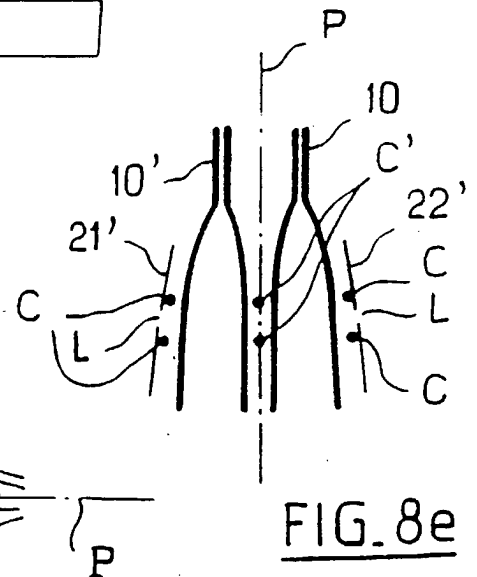


FIG. 8e





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**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)**

Title of Invention

REINFORCED PACKAGING FOR PRODUCTS WHICH MIGHT FLOW

As the below named inventor(s), I/we declare that:

The declaration is directed to:

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The attached application, or

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Application No. \_\_\_\_\_, filed on 03/08/2002,

☐

as amended on \_\_\_\_\_ (if applicable).

I/we believe that I/we am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/we acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

All statements made herein of my/our own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

FULL NAME(S) OF INVENTORS:

Inventor one: Kech-Meng Kim

Signature: [Signature]

Date: 04/07/02

Citizen of: France

Inventor two: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Citizen of: \_\_\_\_\_

Inventor three: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Citizen of: \_\_\_\_\_

Inventor four: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Citizen of: \_\_\_\_\_

☐

Additional inventors are being named on \_\_\_\_\_ additional form(s) attached hereto.

**Declaration for Utility or Design Patent Application**

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EU098493355US, in an envelope addressed to: Commissioner for Patents, Washington, DC 20231, on the date shown below.

Dated: 8/22/02

Signature: [Signature]

Staci Harris  
(Neva M. Dore)